A MODEL OF SUSTAINABLE TOURISM IN AZERBAIJAN: RISKS, ADAPTATION STRATEGIES AND DEVELOPMENT PROSPECTS

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Abstract. *In the face of global environmental challenges, including climate change, ecosystem degradation, and unequal socio-economic development, sustainable tourism is increasingly recognized as a strategic tool for balanced growth. Azerbaijan, with its rich cultural heritage and unique natural resources—particularly the coastal ecosystem of the Caspian Sea—is undergoing a rethinking and adaptation of its tourism policy in line with the UN Sustainable Development Goals (SDGs) and the Glasgow Declaration on Climate Action in Tourism. This paper aims to develop a conceptual model of sustainable tourism in Azerbaijan, taking into account environmental, economic, and social risks. Special focus is given to adaptation strategies such as the implementation of ecological standards, local community involvement, digital tools, and diversification of tourism directions. The paper also analyzes existing barriers and potential opportunities for positioning Azerbaijan as a sustainable tourism destination. Emphasis is placed on the need for a systematic approach grounded in local realities and aligned with global ecological priorities, particularly in the context of the Caspian region.*

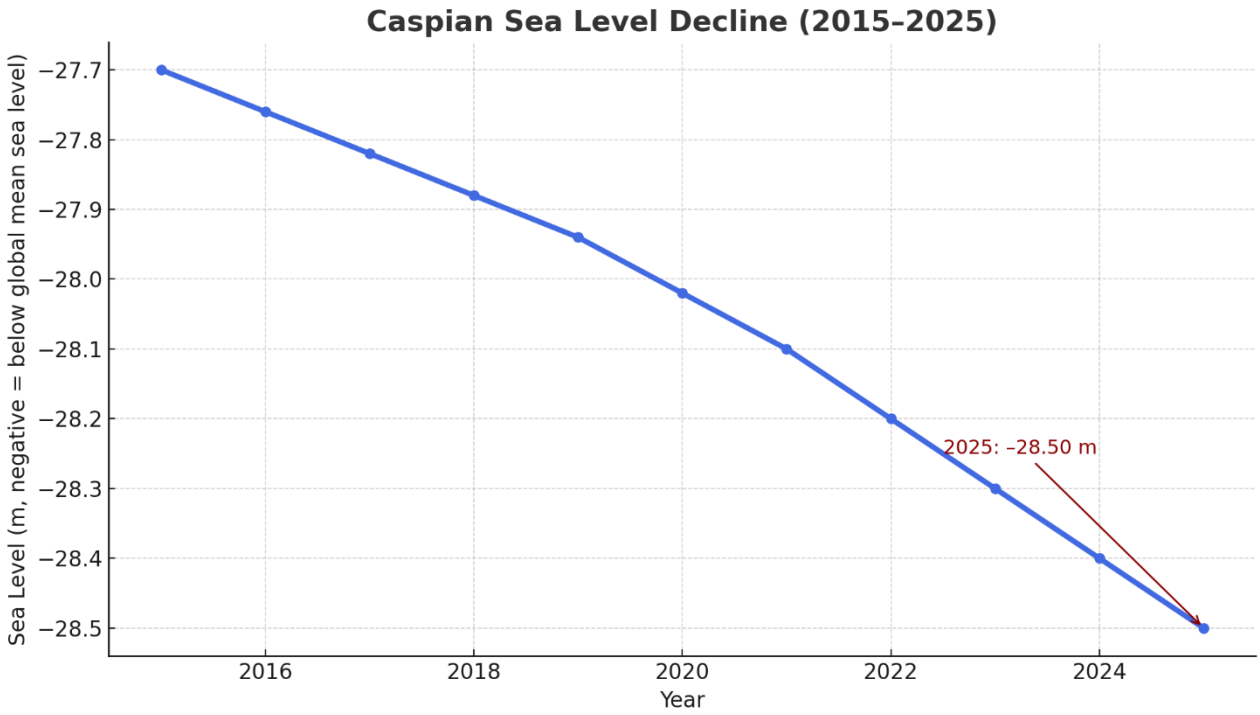
Introduction

Recent research emphasizes the potential of tourism as a transformative driver for achieving sustainability objectives, particularly in developing regions (Zamfir & Corbos, 2015) to support sustainable development, foster economic growth, and preserve cultural and natural heritage. In recent decades, global interest in sustainable tourism has risen dramatically (WTTC, 2024), prompted by growing concerns over climate change, biodiversity loss, and the environmental degradation associated with mass tourism. According to the UNWTO (2023), more than 10% of global GDP is directly or indirectly linked to tourism, but unchecked expansion often comes at the expense of environmental and social well-being.

International initiatives such as the United Nations Sustainable Development Goals (SDGs), the 10-Year Framework of Programmes on Sustainable Consumption and Production, and the Glasgow Declaration on Climate Action in Tourism have set frameworks to transition tourism systems towards sustainability. The Glasgow Declaration, launched in 2021, commits signatories to halving emissions by 2030 and achieving net-zero as soon as possible before 2050 (UNWTO, 2021).

In the context of Azerbaijan, sustainable tourism is becoming an increasingly urgent issue due to the ecological vulnerability of the Caspian Sea region. The Caspian, the world's largest

enclosed inland body of water, faces multiple environmental threats including pollution, declining water levels, and loss of marine biodiversity (Court et al., 2025). Moreover, rural communities often lack access to tourism benefits, while cultural erosion and uncontrolled infrastructure development risk undermining the country's long-term tourism potential.



By 2025, the Caspian Sea is projected to drop by nearly 1 meter compared to 2015, based on observed trends.

Source: Compiled by the author based on State Statistical Committee (2025), UNWTO (2023), GSTC (2024)

To address these challenges, there is a growing need to reimagine Azerbaijan's tourism model in a way that integrates sustainability principles, leverages local assets, and positions the country within broader global frameworks. A sustainable tourism framework that aligns with international best practices while addressing local constraints and opportunities is essential.

This paper aims to develop a comprehensive model of sustainable tourism for Azerbaijan, focusing on identifying environmental, economic, and social risks; evaluating current practices; and outlining adaptation strategies aligned with global sustainability frameworks. In doing so, the paper contributes to the academic and policy discourse on how Azerbaijan can balance economic gains with the imperative to protect its unique environmental and cultural assets, while also supporting long-term regional stability and socio-economic inclusivity.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Literature Review and International Frameworks

Sustainable tourism is defined by UNEP and UNWTO (2005) as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities." This definition reflects a significant shift from earlier tourism paradigms that focused primarily on growth, revenue, and

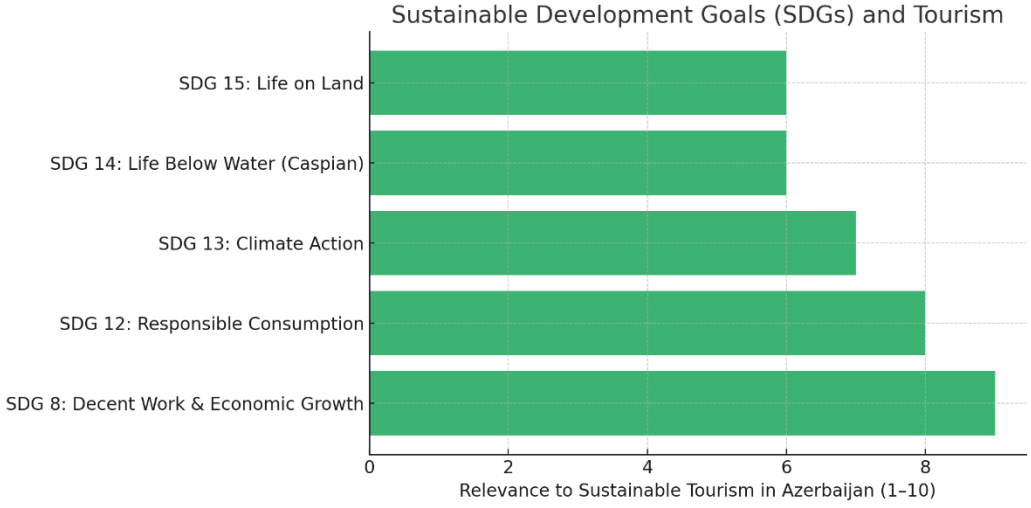
visitor numbers. The concept evolved from early notions of "soft tourism" in the 1980s and 1990s, which promoted low-impact experiences and environmental awareness, into a broader sustainability-driven framework. Today, sustainable tourism emphasizes multi-dimensional resilience, long-term planning, and local empowerment, aligning with principles of the circular economy, climate justice, and intergenerational equity.

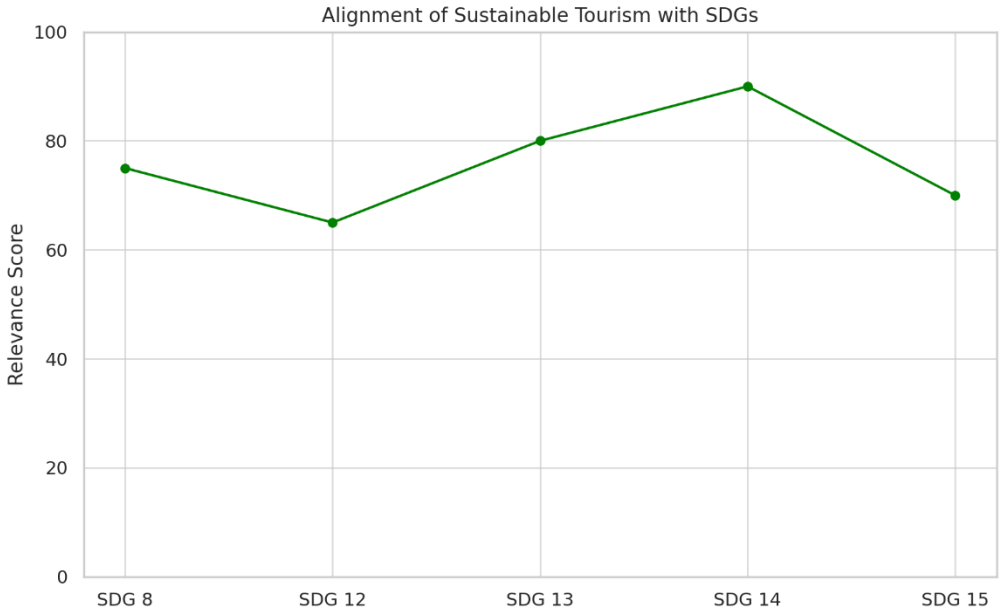
Over the past decade, the concept of **regenerative tourism** has further enriched the theoretical landscape. This emerging approach advocates for tourism not merely to reduce harm, but to actively regenerate ecosystems, restore biodiversity, and revitalize local cultures. Regenerative models propose a deep transformation of tourism as a restorative and healing force—particularly vital for ecologically vulnerable regions such as the Caspian basin.

Within the global policy landscape, the **Sustainable Development Goals (SDGs)** serve as the most prominent reference point for aligning tourism practices with global priorities. The SDGs directly address tourism under:

- **SDG 8.9** – Promote sustainable tourism that creates jobs and promotes local culture and products
- **SDG 12.b** – Develop and implement tools to monitor sustainable tourism impacts
- And indirectly under:
  - **SDG 13** – Climate Action
  - **SDG 14** – Life Below Water
  - **SDG 15** – Life on Land

These goals provide normative direction and evaluation criteria for national and local tourism policies, investment strategies, and regulatory tools (UN General Assembly, 2015).





Source: Compiled by the author based on State Statistical Committee (2025), UNWTO (2023), GSTC (2024)

Global institutions such as **OECD, UNEP, UNWTO**, and **GSTC** have developed strategic toolkits, certification systems, and best-practice repositories to support governments and the private sector in translating sustainability rhetoric into action (OECD, 2022; UNWTO, 2023; Global Sustainable Tourism Council, 2024). For instance, the Global Sustainable Tourism Criteria outline specific performance indicators for accommodation, destination planning, and supply chain management. Similarly, the Green Key and EarthCheck programs provide third-party eco-certification benchmarks recognized worldwide.

However, despite these advancements, implementation of sustainable tourism principles remains uneven—especially in developing countries. Key challenges include:

- Limited institutional capacity and lack of trained personnel
- Absence of sustainability indicators in national tourism statistics
- Conflicting interests between conservation and economic development
- Insufficient coordination between ministries of environment, tourism, infrastructure, and education
- Weak incentive structures for private-sector compliance

The gap between policy frameworks and on-the-ground reality often results in **greenwashing**, token initiatives, or fragmented pilots without systemic follow-through. Furthermore, the lack of standardized monitoring systems makes it difficult to assess long-term impact or scale successful models.

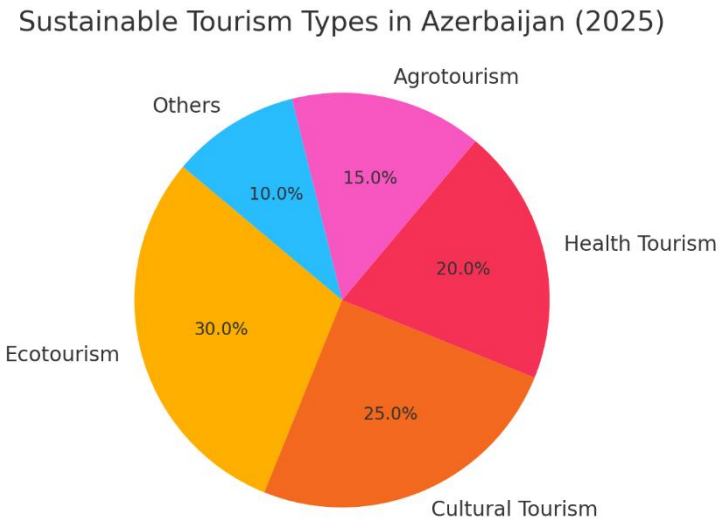
Comparative lessons from regions such as the Western Balkans, South Caucasus, and Central Asia offer valuable insights. For example, Montenegro's adoption of sustainable tourism as a national brand, or Kyrgyzstan's promotion of community-based tourism (CBT) models, highlight the potential for **policy innovation, regional cooperation, and grassroots leadership**. These examples stress the importance of inclusive planning, multi-stakeholder dialogue, and transparent governance mechanisms that hold both public and private actors accountable.

In this light, Azerbaijan stands at a crossroads: it can either follow the outdated trajectory of mass tourism or position itself at the forefront of sustainable transformation in the Caspian region. To do so, it must localize global principles, integrate diverse knowledge systems, and foster capacity-building at all levels—from policymakers to community-based entrepreneurs.

2.2 The Tourism Market in Azerbaijan

Tourism in Azerbaijan is shaped by its diverse geography, multi-ethnic culture, and strategic location between Europe and Asia. The country's tourism offering spans coastal resorts, mountain trails, historical cities, and spiritual heritage sites. Key tourism segments include:

- **Coastal tourism** along the Caspian Sea (e.g., Baku, Lankaran, Nabran)
- **Mountain and rural ecotourism** in the Greater and Lesser Caucasus (e.g., Shahdag, Gusar, Lahij)
- Cultural and historical routes, including UNESCO-listed Sheki, Shusha, Gobustan petroglyphs (UNESCO, 2023), and the Silk Road legacy
- **Wine and gastronomic tourism** centered in regions like Shamakhi, Ismayilli, and Ganja



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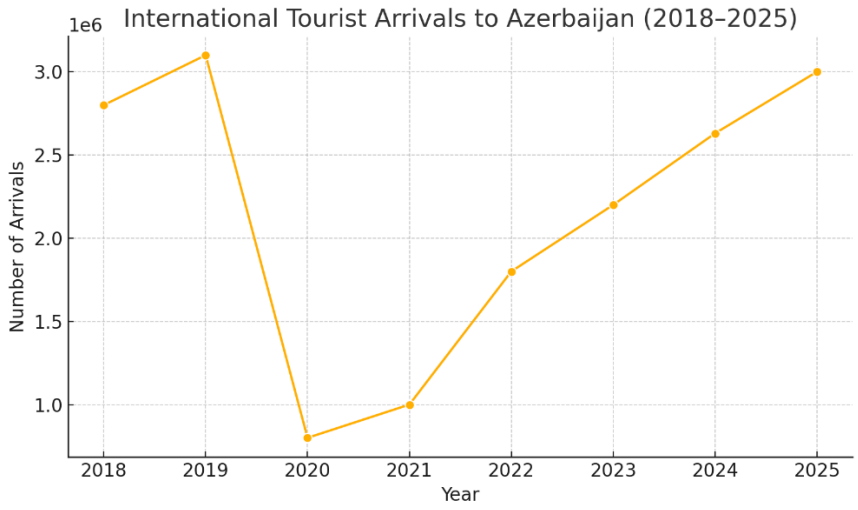
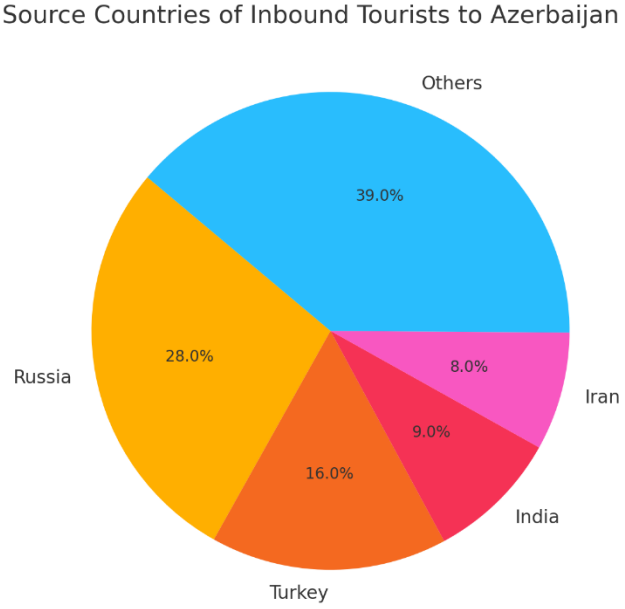
Azerbaijan’s tourism market has undergone significant change in the last decade. After the COVID-19 pandemic downturn, **2024 marked a partial recovery**, with 2.63 million international arrivals. The **top source markets** remained Russia, Türkiye, India, and Gulf countries (State Statistical Committee, 2025). Notably, tourism from South Asia and the Middle East is growing, due to visa liberalization and increased direct flights.





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Domestic tourism has also expanded due to improvements in road and rail connectivity, greater disposable income among urban middle-class families, and government-sponsored campaigns such as **"Travel in Azerbaijan"**. The popularity of eco-retreats and adventure tourism has risen, especially among younger travelers, boosting internal mobility.

Despite this positive trajectory, the tourism sector continues to exhibit notable sustainability gaps:

- **Overconcentration of tourism in Baku** and adjacent zones leads to urban stress, congestion, and uneven economic distribution.
- **Limited green infrastructure**: only a handful of accommodations meet recognized international standards for sustainability. For example, **JW Marriott Absheron Baku** received **Green Key certification**, but such practices are not yet the norm (Green Key Global, 2024).

- **Inadequate rural engagement**: many remote communities lack access to tourism development funds, training, or promotional platforms.
- **Ecotourism and agro-tourism infrastructure** remains underdeveloped. Most rural experiences are informal and lack quality assurance mechanisms.
- **Lack of inter-institutional coordination**: fragmented planning among tourism boards, municipalities, and environmental authorities slows implementation of integrated tourism strategies.
- Weak global branding of Azerbaijan as a sustainable destination: international travelers are rarely targeted with ecological narratives (Dodds & Butler, 2019) or responsible travel guidelines.

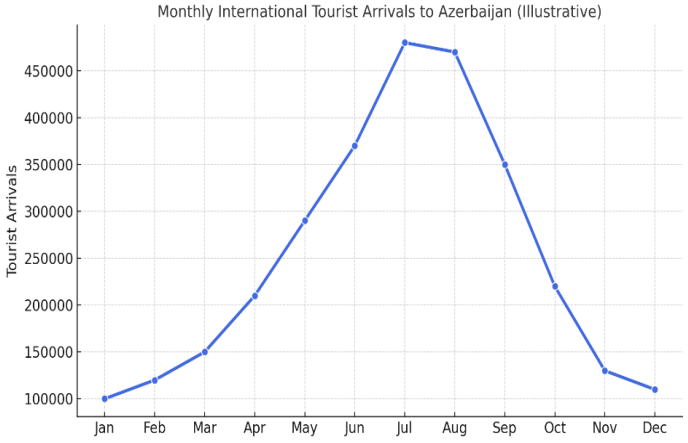
In response, **Azerbaijan signed a Memorandum with the Global Sustainable Tourism Council (GSTC)** in 2024. This partnership aims to develop a national sustainability framework and capacity-building roadmap. The GSTC agreement includes pilot assessments of selected regions, training programs for tourism professionals, and guidance on aligning national policies with global criteria (Global Sustainable Tourism Council, 2024).

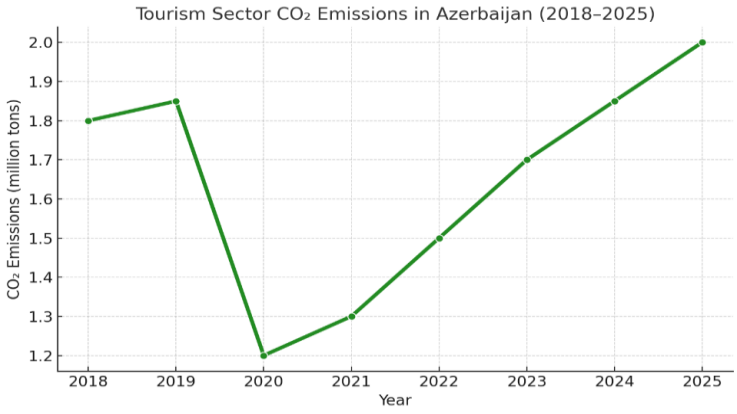
Additionally, several donor-backed initiatives—such as EU4Business and UNDP projects (European Commission, 2022)—have begun promoting local entrepreneurship in tourism, especially among women and youth in regions like Gakh, Zagatala, and Guba. However, such programs are still limited in scale and rely heavily on international support rather than domestic funding.

To move forward, Azerbaijan must:

- Scale up **eco-certification and capacity-building efforts** for tourism SMEs
- Provide **micro-financing mechanisms** and tax incentives for eco-friendly tourism investment
- Expand **vocational training and digital marketing support** for rural tourism stakeholders
- Launch a coordinated **nationwide campaign** positioning Azerbaijan as a sustainable tourism hub in the Caspian region
- Create partnerships between municipalities, NGOs, universities, and private operators to pilot inclusive, green tourism models

Only by addressing these systemic challenges and supporting decentralized tourism development can Azerbaijan diversify its market, reduce seasonality, and ensure that tourism contributes meaningfully to both national growth and ecological stewardship.





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2.3 Methodology

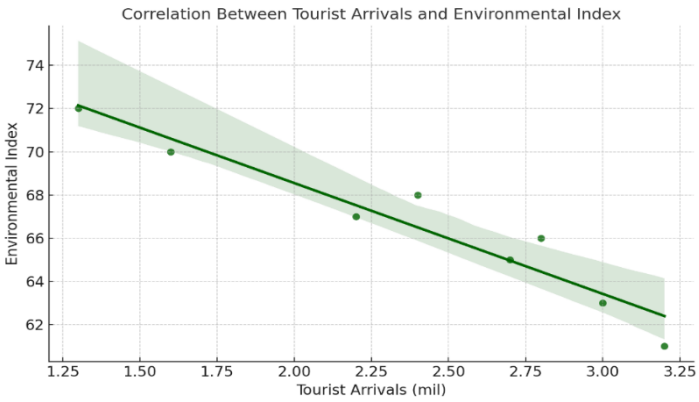
This study employs a qualitative, desk-based conceptual approach, focusing on the analysis of secondary sources and strategic frameworks to develop a context-specific model for sustainable tourism in Azerbaijan. The methodology is grounded in the synthesis of international policy documents, academic literature, governmental reports, and expert analyses published by institutions such as UNWTO, UNEP, OECD, the State Statistical Committee of Azerbaijan, and the Global Sustainable Tourism Council (GSTC). The study follows a four-step analytical framework: Literature Review and Framework Alignment: Examination of global sustainable tourism models and key international frameworks such as the Sustainable Development Goals (SDGs), the Glasgow Declaration on Climate Action in Tourism, and best practices from OECD and UN agencies. Contextualization to Azerbaijan: Mapping these global concepts onto the national context by analyzing Azerbaijan's tourism trends, environmental vulnerabilities, and socio-economic dynamics, especially with respect to the Caspian Sea ecosystem, rural development, and heritage tourism. Risk Identification and Strategy Mapping: Identification of core environmental, economic, and social risks affecting the tourism sector, followed by classification of policy and community-level adaptation strategies. Model Development and Policy Recommendations: Construction of a conceptual model and a set of evidence-informed, context-sensitive recommendations to promote long-term sustainable tourism development, guided by ESG principles and local realities. This methodological structure allows for the integration of complex global sustainability principles with specific local needs and constraints, offering a grounded and scalable vision for Azerbaijan's tourism sector without requiring primary field research.

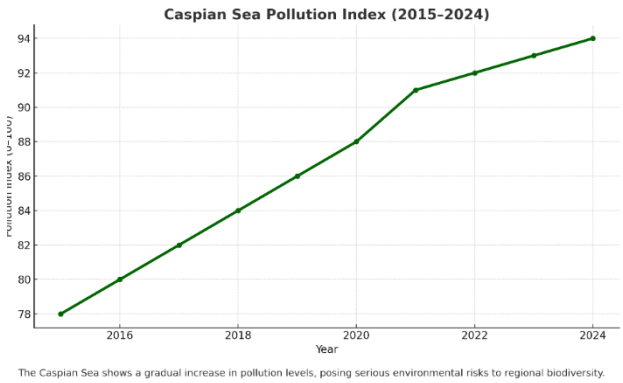
3. CONCEPTUAL MODEL OF SUSTAINABLE TOURISM IN AZERBAIJAN

3.1 Risk Identification

Environmental risks:

- Pollution and habitat loss in the Caspian Sea: The discharge of untreated wastewater, oil spills, and industrial pollutants threatens the delicate marine ecosystems. This not only endangers species such as the Caspian seal but also diminishes the attractiveness of coastal zones for tourism.
- Declining biodiversity, including endangered species: Many species native to Azerbaijan's wetlands, forests, and coastal zones are facing extinction due to unregulated tourism, construction, and climate-induced migration patterns.
- Climate-induced events: Increasing frequency of droughts, floods, and heatwaves disrupts tourism flows and damages infrastructure, while rising temperatures contribute to glacier retreat in the Caucasus Mountains, impacting winter tourism.
- Erosion and deforestation in mountain regions: Construction of roads, resorts, and illegal logging degrade fragile highland ecosystems and increase landslide risks.
- Water scarcity and strain on natural resources: Overconsumption of water by hotels and recreational facilities creates tension with local needs, especially in semi-arid zones of southern Azerbaijan.





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Economic risks:

- High dependence on seasonal and coastal tourism: The lack of year-round and inland tourism development creates economic vulnerability and limits employment stability in the sector.
- Weak infrastructure in rural destinations: Inadequate transport, energy supply, and accommodation options in rural areas hinder tourism diversification and inclusive growth.
- Underdeveloped green investment tools for tourism SMEs: Lack of access to green credit lines, impact funds, and public-private partnerships restricts innovation among small tourism entrepreneurs.
- Economic leakage and dominance of foreign-owned operators: Profits often leave the country due to foreign ownership of hotels and tour companies, reducing the economic multiplier effect for local communities.

Social risks:

- Low local ownership of tourism enterprises: Most tourism services are concentrated among large companies or urban investors, limiting opportunities for rural families and youth.
- Cultural erosion and "disneyfication" of heritage: Simplification or commodification of cultural traditions for tourist consumption dilutes authenticity and may alienate local communities.
- Youth outmigration from remote villages: Lack of employment and entrepreneurial support in the tourism sector accelerates rural depopulation and skills drain.
- Over-tourism pressures in historic zones: Sites such as Icherisheher or Gobustan face crowding, infrastructure stress, and degradation of cultural landmarks.

3.2 Adaptation Strategies

1. Eco-certification and Green Standards: Encourage widespread adoption of globally recognized certifications such as Green Key and GSTC. Incentives may include tax breaks, government-backed promotional campaigns, and access to funding mechanisms. Moreover, Azerbaijan should develop a localized certification framework that reflects national sustainability priorities, coupled with training programs for small and medium tourism enterprises (SMEs) to build capacity and ensure compliance.
2. Product Diversification: Shift tourism focus beyond Baku by investing in thematic tourism corridors (e.g., Silk Road, Mountain Villages Route). Promote agritourism, healing tourism (linked to natural springs), and adventure tourism (hiking, paragliding, horseback riding).

Diversification efforts should be data-driven and culturally sensitive, incorporating the voices of local stakeholders and respecting environmental thresholds.

3. **Community Engagement**: To ensure inclusive and resilient tourism development, it is crucial to establish decentralized tourism planning bodies with active participation from local NGOs, women's associations, and youth organizations. These bodies should be empowered to co-create tourism strategies and implement participatory planning practices while monitoring social and environmental outcomes. According to Paulino et al. (2023), such participatory governance structures—especially when aligned with local cultural values—enhance community ownership, foster cooperative-based business models, and promote more equitable benefit-sharing mechanisms.

4. Digital Tools: Leverage digital platforms such as smart tourism dashboards, AI-based visitor flow analysis, and QR-code-based heritage trails. Launch user-friendly mobile applications that guide tourists through sustainable choices—from certified hotels to locally sourced restaurants. Incorporate real-time alerts about ecosystem vulnerability and crowding at key attractions, helping manage visitor behavior.

5. Entrepreneurship and Training: Embed sustainable tourism modules in university curricula and vocational schools, focusing on ESG, ecotourism entrepreneurship, digital marketing, and customer service. Launch accelerator programs that connect green startups with investors and mentors. Expand microgrant schemes targeted at women and youth-led businesses offering local experiences, eco-lodging, and sustainable transport services.

3.3 Long-term Prospects

If these strategies are implemented effectively, Azerbaijan can position itself as a regional pioneer in sustainable tourism. Potential benefits include:

- International recognition and competitive branding as a green destination in the Caspian basin, attracting ecologically conscious travelers and investors.
- Reduction in the tourism sector's carbon footprint through adoption of renewable energy, efficient transport, and green building practices.
- Revival of rural economies through job creation, reverse migration, and support for intangible cultural heritage (e.g., music, dance, crafts).
- Preservation of sensitive ecological zones through coordinated conservation-tourism partnerships and ecosystem restoration efforts (UNEP, 2022).
- Institutionalization of ESG metrics in tourism investment decisions, infrastructure procurement, and public reporting frameworks.

To realize this vision, Azerbaijan should establish a National Sustainable Tourism Observatory that collects data, facilitates stakeholder dialogue, and supports evidence-based policymaking. A multi-stakeholder platform involving tourism operators, academics, NGOs, and government agencies should steer implementation, while regional cooperation with other Caspian countries can amplify impact and create transboundary sustainability corridors.

In the long run, sustainable tourism can serve as a catalyst for broader green transformation, embedding environmental consciousness into national identity and offering a replicable model for countries balancing development and conservation.

4. Conclusion

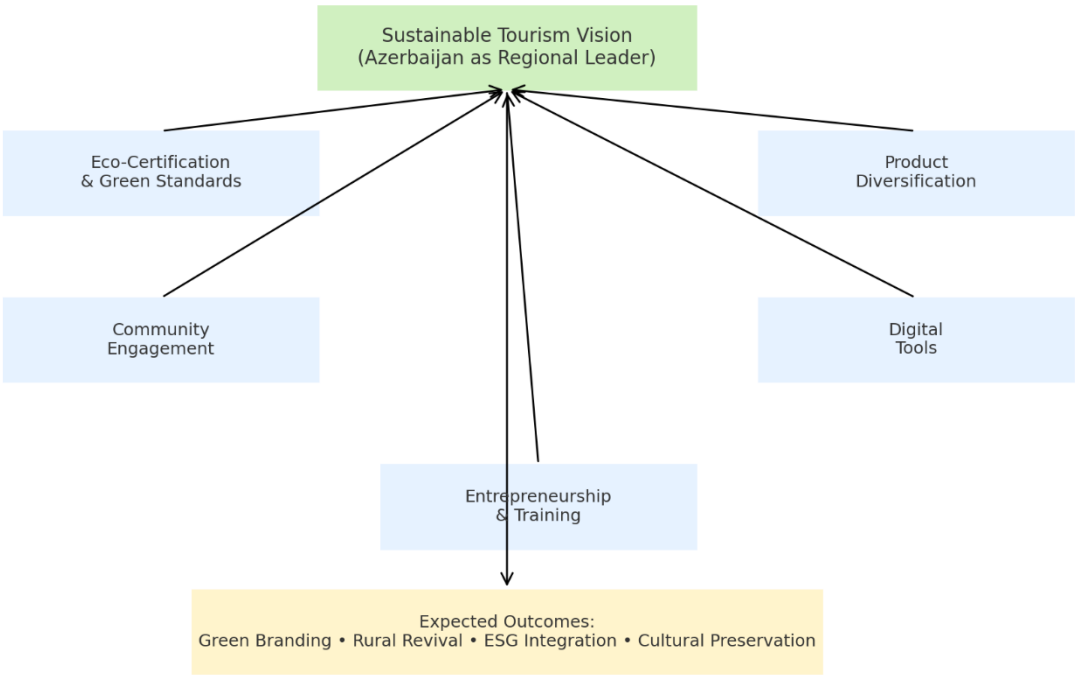
1. Azerbaijan stands at a strategic crossroads in redefining its tourism sector as a vehicle for sustainable development. With its rich biodiversity, cultural heritage, and geopolitical position

in the Caspian region, the country holds immense potential to emerge as a regional leader in sustainable tourism. However, realizing this vision demands a transition from conventional, volume-driven tourism to a value-based model that balances economic growth with environmental protection and social equity.

2. This paper presents a comprehensive conceptual model that identifies the multifaceted risks associated with Azerbaijan's tourism landscape and proposes targeted adaptation strategies. These include advancing eco-certification, promoting product diversification, enhancing community engagement, adopting digital tools, and fostering sustainable entrepreneurship. Such a holistic approach can facilitate inclusive economic development, preserve natural and cultural assets, and mitigate environmental degradation.

3. Long-term success will depend on the institutionalization of sustainability principles through coordinated policy frameworks, capacity-building efforts, and transparent governance. The establishment of a National Sustainable Tourism Observatory, integration of ESG indicators into investment and planning processes, and strengthening regional partnerships will be crucial.

4. Embedding sustainability into education, public communication, and local governance structures will not only ensure continuity but also create a shared national ethos around responsible tourism. By aligning tourism policy with global frameworks such as the SDGs and the Glasgow Declaration, Azerbaijan can transform tourism from a passive economic sector into a proactive driver of sustainability, resilience, and international cooperation.



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